

Abstract

Provided is a composite member comprising a ceramic base and a metallic member which are bonded to each other. An active metal foil is disposed on the surface of the ceramic base and a solder material comprising Au or a solder material comprising an Au-Ag alloy is disposed on the active metal foil, the active metal foil and the solder material are heated to form a bonding layer, the metallic member is disposed on the surface of the bonding layer, and these are pressed and heated to bond the bonding layer and the metallic member through solid phase bonding. Since in this composite member the bonding layer and the metallic member are bonded by solid phase bonding, the composite members can be effectively inhibited from breakage caused by residual stress at the time of bonding and, besides, is excellent in thermal cycle characteristics and thermal shock characteristics.

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